

Claims

1. A data record reproducing player characterized by the capability of executing reproduction of a program content; comprising:

a recording device to record save data of said program content;

an encryption processing unit to execute an encryption process on save data to be stored in said recording device and a decryption process on said save data to reproduce, retrieved from said recording device;

input means to enter use restriction information on save data; and

a control unit to determine an encryption processing method or a decryption processing method for save data,

wherein said control unit comprises a structure to determine an encryption processing method for save data to be stored in said recording device following use restriction information input from said input means, and to determine a decryption processing method for save data to reproduce, retrieved from said recording device, according to save data use restriction information set up in a data management file stored in a memory or a recording device said control unit can access, and

wherein said encryption processing unit comprises a structure to execute encryption processing or decryption processing on save

data with the use of different encryption keys suitable to an encryption processing method or a decryption processing method determined by said control unit.

2. The data record reproducing player according to claim 1 wherein said save data use restriction information is a program restriction allowing the use of save data on condition of the identity of a content program, and said data management file is structured as a table storing program restriction information oriented to the identifier of the content program, and

wherein said encryption processing unit,

when the input use restriction information from said input means or use restriction information set up in said data management file is entered or set to restrict a program, executes encryption processing or decryption processing on save data with the use of a program's individual save data encryption key created based on at least either said content program's individual encryption key, or content program's individual encryption key or individual information; and

when the input use restriction information from said input means or use restriction information set up in said data management file is entered or set not to restrict a program, executes encryption processing or decryption processing on save data with the use of a system-shared encryption key stored in said data record reproducing player or a system save data encryption

key created based on the system shared encryption key.

3. The data record reproducing player according to claim 2 wherein said content program's individual encryption key is a content key Kcon stored in the header portion of content data including said content program; and

said system-shared encryption key is a system signature key Ksys stored in common into a plurality of different data record reproducing players.

4. The data record reproducing player according to claim 1 wherein

said save data use restriction information is a record reproducing player restriction allowing the use of save data on condition of the identity of a data record reproducing player, and said data management file is structured as a table storing record reproducing player restriction information oriented to the identifier of a content program, and

wherein said encryption processing unit,

when the input use restriction information from said input means or use restriction information set up in said data management file is entered or set to restrict record reproducing player, executes encryption processing or decryption processing on save data with the use of a record reproducing player's individual save data encryption key created based on at least either said

data record reproducing player's individual encryption key, or
data record reproducing player's individual encryption key or
individual information, and

when the input use restriction information from said input
means or use restriction information set up in said data
management file is entered or set not to restrict a program,
executes encryption processing or decryption processing on save
data with the use of a system-shared encryption key stored in said
data record reproducing player or a shared save data encryption
key created based on the system-shared encryption key.

5. The data record reproducing player according to claim 4
wherein

said data record reproducing player's individual encryption
key is the corresponding data record reproducing player's
individual signature key Kdev stored in said data record
reproducing player, and

said system-shared encryption key is a system signature key
Ksys stored in common into a plurality of data record reproducing
players.

6. The data record reproducing player according to claim 1
wherein

said save data use restriction information is,
a user restriction allowing the use of save data on condition of

the identity of a user, and

said data management file is structured as a table storing a user restriction information oriented to the identifier of a content program, and

wherein said encryption processing unit,

when the input use restriction information from said input means or use restriction information set up in said data management file is entered or set to restrict a user, executes encryption processing or decryption processing on save data with the use of a user's individual save data encryption key created based on a password input from said input means, or a user's individual save data encryption key created based on said password, and

when the input use restriction information from said input means or use restriction information set up in said data management file is entered or set not to restrict a user, executes encryption processing or decryption processing on save data with the use of a system-shared encryption key stored in said record reproducing player or a shared save data encryption key created based on the system-shared encryption key.

7. The data record reproducing player according to claim 6 wherein

said system-shared encryption key is a system signature key Ksys stored in common into a plurality of record reproducing

players.

8. A save data processing method in a data record reproducing player capable of reproducing a program content comprising:

an encryption processing mode determining step to determine an encryption processing mode to store save data into a recording device according to input use restriction information from input means; and

an encryption key selection step to select an encryption key applied to encryption processing according to the encryption processing mode determined at said encryption processing mode determining step, and

wherein encryption processing is performed on save data with the use of the encryption key selected at said encryption key selection step.

9. The save data processing method according to claim 8 wherein said save data use restriction information is a program restriction allowing the use of save data on condition of the identity of a content program, and

in the case of restricting a program, at the said encryption key selection step, an encryption key applied in encryption processing is selected out of said content program's individual encryption key, or a program's individual save data encryption key created based on at least either a content program's individual

encryption key or individual information, and

in the case of not restricting a program, an encryption key applied in encryption processing is selected out of a system-shared encryption key stored in said data record reproducing player, or a shared save data encryption key created based on the system-shared key.

10. The save data processing method according to claim 8 wherein said save data use restriction information is a record reproducing player restriction allowing the use of save data on condition of the identity of a data record reproducing player, and

in the case of restricting a record reproducing player, at said encryption key selection step, an encryption key applied to encryption processing is selected out of said data record reproducing player's individual encryption key, or a record reproducing player's individual save data encryption key created based on at least either the data record reproducing player's individual encryption key or individual information; and

in the case of not restricting a record reproducing player, an encryption key is selected out of a system-shared encryption key stored in said data record reproducing player, or a shared save data encryption key created based on the system shared encryption key as the key applied to encryption processing.

11. The save data processing method according to claim 8 wherein

said save data use restriction information is a user restriction allowing the use of save data on condition of the identity of a user, and

in the case of restricting a user, at said encryption key selection step, an encryption key applied to encryption processing is selected out of a user-input password, or a user's individual save data encryption key created based on said password; and

in the case of not restricting a record reproducing player, an encryption key applied in encryption processing is selected out of a system-shared encryption key stored in said data record reproducing player, or a shared save data encryption key created based on the system shared encryption key.

12. A save data processing method in a data record reproducing player capable of reproducing a program content comprising;

a decryption processing mode determining step to determine a decryption processing mode to reproduce save data retrieved from a recording device, according to the set use restriction information set up a data management file stored in a memory means or a recording device; and

a decryption key selection step to select a decryption key according to the decryption processing mode determined at said decryption processing mode determining step, and

wherein decryption processing is executed on save data with the use of a decryption key selected at said decryption key

selection step.

13. The save data processing method according to claim 12 wherein said save data use restriction information is a program restriction allowing the use of save data on condition of the identity of a content program, and

in the case of restricting a program, at said decryption key selection step, a decryption key applied to decryption processing is selected out of said content program's individual encryption key, or program's individual save data decryption key created based on at least either the content program's individual encryption key or individual information; and

in the case of not restricting a program, a decryption key applied in decryption processing is selected out of a system-shared encryption key stored in said data record reproducing player, or a shared save data encryption key created based on the system-shared encryption key.

14. The save data processing method according to claim 12 wherein said save data use restriction information is a record reproducing player restriction allowing the use of save data on condition of the identity of a data record reproducing player, and

in case the of restricting a record reproducing player, at said decryption key selection step, decryption key applied in decryption processing is selected out of said data record

reproducing player's individual encryption key, or the record reproducing player's individual save data decryption key created based on at least either the data record reproducing player's individual encryption key or individual information; and

in the case of not restricting a record reproduction player, a decryption key applied in decryption processing is selected out of a system-shared encryption key stored in said data record reproducing player, or a shared save data decryption key created based on the system-shared encryption key.

15. The save data processing method described in claim 12 wherein said save data use restriction information is a user restriction allowing the use of save data on condition of the identity of a user, and

in the case of restricting a user, at said decryption key selection step, a decryption key applied to a decryption process is selected out of a user-input password, or the user's individual save data decryption key created based on said password; and

in the case of not restricting a record reproducing player, a decryption key applied in decryption processing is selected out of a system-shared encryption key stored in said data record reproducing player, or a shared save data decryption key created based on the system-shared encryption key.

16. A program providing medium that provides a computer program to

have a save data process executed in a data record reproducing player capable of reproducing a program content on a computer system, said program comprising:

an encryption processing mode determining step to determine an encryption processing mode to store save data into a recording device, according to input use restriction information from input means;

an encryption key selection step to select an encryption key applied to an encryption process oriented to the encryption processing mode determined at said encryption processing mode determining step; and

a step to execute save data encryption processing with the use of an encryption key selected at said encryption key selection step.

17. A program providing medium that offers a computer program to execute save data processing in a data record reproducing player capable of reproducing the program content on a computer system, said computer program comprising:

a decryption processing mode determining step to determine a decryption processing mode to reproduce save data retrieved from a recording device, according to set use restriction information set up in a data management file stored in memory means or a recording device;

a decryption key selection step to select decryption key

applied in decryption processing oriented to the decryption processing mode determined at said decryption processing mode determining step; and

a step to execute save data decryption processing with the use of a decryption key selected at said decryption key selection step.

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